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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Rene Purnadi

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EXAMINER

MEHRA, INDER P

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,874	<b>Applicant(s)</b> PURNADI ET AL.	
	<b>Examiner</b> Inder P. Mehra	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-26 and 28 is/are allowed.
- 6) ☒ Claim(s) 1-3, 18-20 and 27 is/are rejected.
- 7) ☒ Claim(s) 4-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***DETAILED ACTION***

1. This office action is in response to amendment dated 1/13/06. Claims 1-26 are pending.

***Claim Rejections - 35 USC f 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action'

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 18-20 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ludwig et al.** (US 6,816,471) in view of **Yin et al.** (US 6,490,251).

Regarding claims 1 and 27, Fig 4 of Ludwig et al. teaches "a radio access network (401) coupled to a core network (400) monitoring wireless transmission of packet according to a layer protocol the radio access network including equipment implementing a radio layer (L1)", and Fig. 6 of Ludwig et al. teaches "the upper layer (L3) distinguished at least in that the radio layer (L2) receives data as packets from the upper layer (L3) and prepares the data for transmission over air by forming radio frames corresponding to the packets" also disclosed in column 5, line 55-column 6 line 5, the method characterized by:

A step of local acknowledgement in which the radio layer sends a local acknowledgement to the upper layer on occurrence of a predetermined event is disclosed in column 8, lines 8-32. The reference discloses link reset corresponds to

predetermined event and providing information to L3 layer corresponds to claimed step of sending local acknowledgement.

Ludwig et al. fails to disclose a step of slow release in which a upper layer removes from the buffer maintained by the upper layer the oldest packet in the buffer when the buffer is full and a new packet arrives, and does so independently of whether the oldest packet has been acknowledged by the radio layer of the terminal.

Yin et al. discloses an upper layer removing from the buffer maintained by the upper layer the oldest packet in the buffer when the buffer is full and in IP the oldest packet gets dropped first independently of whether the oldest packet has been acknowledged or not (see column 8, lines 14-20 of Yin et al.)

At the time invention was made it would have been obvious to combine Yin et al method of removing the oldest packet in the buffer to the method of Ludwig et al. One in ordinary skill in art would have been motivated to do this to provide a congestion control mechanism in network (see column 8, lines 15-20 of Yin et al).

Regarding claims 2 , Ludwig et al. further teaches in the step of local acknowledgement, the radio layer includes with the local acknowledgement a sequence number disclosed in column 7, line 54- column 8, line 7. sequence number of column 8, line 7 corresponds to the claimed sequence number.

Regarding claim 3, Ludwig et al. further teaches process of removing the packet from the buffer having a sequence number equal to the sequence number included With the local acknowledgement disclosed in column 7, lines 55-65 .The reference discloses

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data packets corresponding to a sequence number acknowledged are removed from the buffer.

Regarding claim 18, Ludwig et al. further teaches the method in which local acknowledgement signals the upper layer to release the buffer to the target is disclosed in column 9, lines 5-19. The reference discloses transferring of unacknowledged 1-3 data packets.

Regarding claim 19, Ludwig et al. further teaches in Fig (2) a computer readable storage structure (buffer-3) embodying computer program code thereon for execution by one or more computer processors in radio access network, and in Fig (1) computer program code instructions for performing the steps of the method.

Regarding claim 20, Fig 3 of Ludwig et al. further teaches a radio access network comprising equipment adapted to perform the said method.

#### ***Allowable Subject Matter***

4. Claims 4-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 21-26 and 28 are allowed.

#### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-28 have been considered but are not persuasive.

Applicant argued “Ludwig in fact fails to disclose the local acknowledgement, and second, that there is no motivation for altering the teachings of Ludwig according to the teachings of Yin, and so the prior art fails to disclose the slow release.

Examiner responds, “ this limitation is disclosed in Ludwig’s column 8, lines 8-32. The reference discloses link reset corresponds to predetermined event and providing information to L3 layer corresponds to claimed step of sending local acknowledgement.

At the time invention was made it would have been obvious to combine Yin et al method of removing the oldest packet in the buffer to the method of Ludwig et al. One in ordinary skill in art would have been motivated to do this to provide a congestion control mechanism in network (see column 8, lines 15-20 of Yin et al).

Applicant, further, argues, “**Applicant does concede** that entities do exist that maintain buffers of data items and that **drop the oldest data item from time to time, for one reason or another**, but applicant respectfully submits that the slow release limitation of claim requires more--there must be an upper layer doing the release, and the upper layer must at least sometimes receive local acknowledgements but must (at least sometimes) release the oldest packet from a buffer it maintains independent of any local acknowledgement--and neither Yin, nor the combination of Yin and Ludwig, teach the slow release of claim 1.

In response, Examiner responds that Yin et al. discloses an upper layer removing from the buffer maintained by the upper layer the oldest packet in the buffer when the buffer is full and in IP the oldest packet gets dropped first independently of whether the oldest packet has been acknowledged or not (see column 8, lines 14-20 of Yin et al.).

Applicant argues, “Ludwig fails to disclose the local acknowledgement. With respect to the first point, the argument made in response to the previous Office action is in brief, that instead of the local acknowledgement recited in claim 1, Ludwig discloses at the cited location only that the layer must always keep track of which L3 data units are included in which L2 data units, and that there is no teaching of the L2 layer (asserted by the Office action to correspond to the recited radio layer) sending a local acknowledgement to the upper layer on the occurrence of a predetermined event. The cited text states only that “In a general sense, any time during the protocol operation, the L2 ARQ entity must be able to provide information about the contents of its send buffer in terms of the L3 data units”; it nowhere states that L2 at one end of a communication path acknowledges to the L3 layer at the same end of the communication path (so that the acknowledgement is “local”) that packets have been successfully communicated to the other end of the communication path (which L2 would know because of a peer L2 at the other end having provided an acknowledgement of same).

In response, it is stated that Ludwig explicitly discloses “the radio layer sends a local acknowledgement to the upper layer on occurrence of a predetermined event is disclosed in column 8, lines 8-32. The reference discloses link reset corresponds to predetermined event and providing information to L3 layer corresponds to claimed step of sending local acknowledgement.”. At the occurrence of “reset conditions without a handover” is predetermined condition--- resulting into providing information to L3 layer corresponding to “sending local acknowledgement”, In this way, similar to the above example of a reset without a handover, the complete transmission of all L3 data units is secured. Resumption of

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transmission starting with unacknowledged L3 data units is tantamount to acknowledgement of predetermined event having occurred.

**In light of above explanation, arguments by applicant are not persuasive.**

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.




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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Inder Pal Mehra 8/4/06*  
Inder P Mehra  
Examiner  
Art Unit 2617

  
JOHN PEZZLO  
PRIMARY EXAMINER